PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) **International Patent Classification 7 :** G06K 19/07, G01S 7/35, 13/76 — **A1**

(11) **International Publication Number:** **WO 00/28475**

(43) **International Publication Date:** 18 May 2000 (18.05.00)

(21) **International Application Number:** PCT/GB99/03642

(22) **International Filing Date:** 4 November 1999 (04.11.99)

(30) **Priority Data:**
9824403.1 7 November 1998 (07.11.98) GB

(71) **Applicant** *(for all designated States except US)*: MARCONI ELECTRONIC SYSTEMS LIMITED [GB/GB]; The Grove, Warren Lane, Stanmore, Middlesex HA7 4LY (GB).

(72) **Inventor; and**

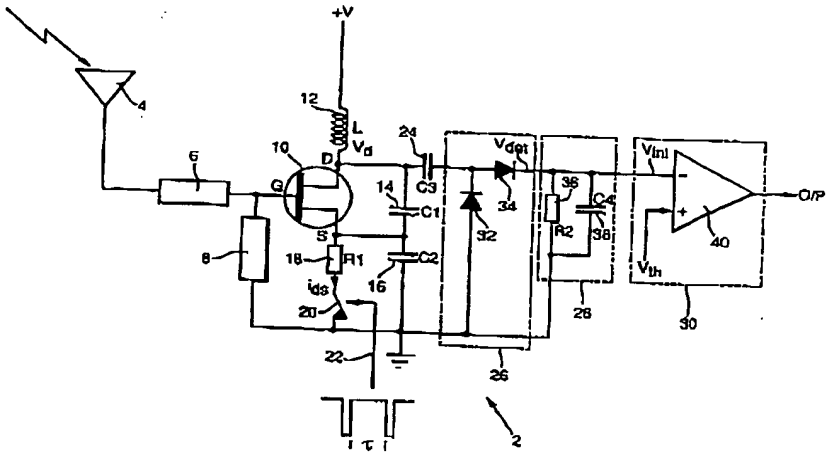
(75) **Inventor/Applicant** *(for US only)*: FORSTER, Ian, James [GB/GB]; 31 Great Cob, Springfield, Chelmsford, Essex CM1 6LA (GB).

(74) **Agent:** HOSTE, Colin, Francis; GEC Patent Dept., Waterhouse Lane, Chelmsford, Essex CM1 2QX (GB).

(81) **Designated States:** AU, CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) **Title:** A RECEIVER CIRCUIT



(57) **Abstract**

A detector receiver circuit (2) for use as a wake–up detector for detecting an amplitude modulated carrier signal is described. The circuit (2) comprises: an antenna (4) for receiving the modulated carrier signal; a transistor (10), such as an FET, is connected to the antenna (4) and configured to operate as a detector of modulation of the carrier frequency. The circuit further comprises a resonator circuit (12–16) which is also connected to the transistor and configured such that the transistor (10) can simultaneously oscillate at substantially the modulation frequency; an oscillator quenching means (20) for periodically quenching oscillation of the transistor (10) and means (26, 28, 30) for sensing the characteristics of the build–up of oscillation to indicate the presence of a modulated carrier signal. How quickly the magnitude of oscillation of the transistor (10) builds up is dependent on whether the antenna is receiving a carrier signal which is modulated at the frequency of self–oscillation of the transistor and this is utilised to detect for the presence of a valid wake–up signal.